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EXAMINER	
CHOW, JEFFREY J	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/786,264	BOGER, ROBERT A.	
	Examiner	Art Unit	
	Jeffrey J. Chow	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30,32-37,39,41,43 and 45-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30,32-37,39,41,43 and 45-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Examiner notes, in Applicant Remarks, that the reference to "Browne" is meant to reference "Frederick".

Applicant's arguments with respect to claims 1 – 30, 32 – 37, 39, 41, 43, and 45 – 55, filed 02 April 2009, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Applicant argues Frederick et al. (US 6,314,479) is directed to an interface device where a stand-alone TV mode and a slave mode can be independent used without conversion of signal upon the change of mode and the combination of using converters would result in undesirable transition between stand-alone TV mode and slave mode (pages 13 – 24). Though Frederick does not disclose the use of converters, Frederick also dose not disclose the use of converters would be undesirable. Auld et al. (US 6,327,000) discloses display monitor 132 that can display images/video/graphics information at high resolution or low resolution at various scanning modes such as interlaced or progressive scanning mode (column 4, lines 12 – 19). Since Frederick disclose the display device can display in interlace and progressive scanning mode (column 5, lines 33 – 35) and the display device can receive from multiple input sources (Figure 1) and can the display device can utilize picture-in-picture (column 16, lines 12 – 23), it would have been obvious to include converters or process to convert non-interlaced signals to interlaced signals and vise-versa, as taught by Auld. This would not destroy the system of Frederick because the display device will still operate in either interlace or non-interlace scanning mode and the display device will display the desired content desired by the user.

Applicant argues none of the cited prior art discloses a display apparatus having a microprocessor disposed within to process instruction, such as changing a channel (pages 16 and 19). Frederick disclose the control commands can be sent to the display (column 13, line 66 – column 14, line 26) and therefore it is inherent that the display electronics 80 or the control electronics 82 in the display device process the control commands that are sent to the display. Furthermore, it is well known in the art that the concept of a display unit having a processor unit to control volume, channel, or other basic television options is well known and expected in the art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 – 10, 12 – 25, 27 - 30, 32 – 37, and 46 – 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frederick et al. (US 6,314,479) in view of Auld et al. (US 6,327,000) and Roskowski et al. (US 5,257, 348).

Regarding independent claim 13, Frederick teaches a computer system comprising

a host computer (Figure 6: Host Computer 14) system including

a processor (it is inherent that Frederick has a processor because computer has a processor and because Frederick process information in and out of the computer),

a memory coupled to said processor (it is inherent that Frederick has a memory because computer has a memory, either being hard drive, RAM, and/or, cache and because a processor needs memory to store input and output-type data to be able to process data),

a video controller coupled to said processor and said memory (column 5, lines 33 – 35: it is inherent that Frederick has a display controller as the PC 14 and display 12 support two different viewing modes where one mode is configured for displaying PC graphics and the other mode is configured for displaying TV video; column 5, lines 31 and 32: PC 14 drives the display 12 with a standard RGB or TMDS video signal).

means for receiving a user input (column 5, lines 1 – 7: an infrared sensor on the display 12). Frederick does not expressly disclose a user input to switch a mode of operation from an interlace mode of operation to a noninterlaced mode of operation, however Frederick does disclose the PC 14 and display 12 support two different viewing modes where one mode is configured for displaying PC graphics and the other mode is configured for displaying TV video (column 5, lines 33 – 35). Auld discloses display monitor 132 that can display images/video/graphics information at high resolution or low resolution at various scanning modes such as interlaced or progressive scanning mode (column 4, lines 12 – 19). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Frederick's system to utilize a display that is capable of being switched between interlaced and progressive scanning mode based on the desired content to be viewed by a user. One would be motivated to do so because a user would save space and money by having one display unit that is capable of displaying in many different formats.

Frederick did not expressly disclose a video capture circuitry configured, in response to receiving said user input switching to the noninterlaced mode, to convert the television compatible signal into a noninterlaced television output to be displayed in an overlay window while said visually detectable output from the host computer system is being displayed, however Frederick does disclose PIP functionality (column 16, lines 12 – 23). Roskowski discloses an A/D converter 15 (column 4, line 60 – column 5, line 11 and Figure 2) and a circuit 19 that translates interlaced video data into non-interlaced data and non-interlaced computer graphics data into interlaced data for presentation on output display monitors capable for displaying either interlaced data or non-interlaced data (column 6, lines 9 – 16 and Figure 2) and the viewing of television and computer graphics at the same time by allowing the display of television in one window and the display of computer graphics in another window overlaid and displayed at the same time in the same frame buffer (column 1, lines 11 – 16 and lines 18 – 30). Auld discloses multiple pictures in pictures on a television monitor 1600 displaying a number of display regions corresponding to various sources, including video, graphics, and television (column 17, lines 14 - 36 and Figure 16). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Frederick's system by, when in non-interlaced mode, converting an interlaced signal to a non-interlaced signal or, when in interlaced mode, converting a non-interlaced signal to an interlaced signal and outputting the converted interlaced signal with a non-interlaced signal or the converted non-interlaced signal with an interlaced signal on an overlay window of a non-interlaced display or an interlaced display, respectively through out. One would be motivated to do so because this would allow less expensive monitors and allow users to view multiple sources at the same time.

Frederick teaches a display apparatus coupled to the video controller of the host computer system (Figure 6: A/V display 12), the display apparatus comprising circuitry allowing an interlaced mode of operation (column 5, lines 3 – 5: the display 12 may function as a stand-alone TV, including the capability to display standard interlaced TV video) and a noninterlaced mode of operation (column 5, lines 36 and 37: the PC 14 and display 12 support at least 480 active lines per frame of progressively scanned video) (column 15, lines 14 and 15: the PC Theatre display 12 and PC 14 support two modes of operation: TV and PC; column 15, lines 57 and 58: digital TV support is recommended by both the PC Theatre PC 14 and display 12; column 16, lines 12 – 23: PIP functionality and composite video; column 19, lines 14 – 31: display 12 support two modes of operations: stand-alone mode and slave mode. In the stand-alone mode, the display 12 operates as a standard TV. In the slave-mode, the display 12 displays the VGA video from the PC 14; column 5, lines 33 – 35: PC 14 and display 12 support two different viewing modes: one configured for the display of PC graphics, and other configured for the display of TV video), the display apparatus comprising

a screen (it is inherent that Frederick has a screen because it is inherent that a display apparatus has a screen), said screen operable to display noninterlaced signals (column 21, lines 37 – 39: sending an Input Source Select command to switch the display to the P&D input, wherein this enables the PC to drive the video input of the display) including visually detectable output from the host computer system (column 5, lines 33 – 35: PC 14 and display 12 supports two different viewing modes: one configured for the display of PC graphics, and the other configured for the display of TV video; Figure 6: Digital Graphic Display 46 and Analog Graphic Display 48 from the Host Computer 14)

when operating in the noninterlaced mode of operation (column 21, lines: 25 – 56) and operable to display a television compatible signal when operating in the interlaced mode of operation (column 5, lines 33 – 35: PC 14 and display 12 supports two different viewing modes: one configured for the display of PC graphics, and the other configured for the display of TV video; Figure 6: Digital Graphic Display 46 and Analog Graphic Display 48 from the Host Computer 14),

a communication channel between said host computer system and said display apparatus (Figure 6: User Input USB (42) from the A/V Display 12 to Host Computer 14 and Commands (USB) 44 from Host Computer 14 to A/V Display 12), the communication channel for transmitting commands and information to and from said host computer system and to and from said display apparatus (Figure 6: 42 and 44),

a microprocessor (column 18, lines 46 and 47 and Figure 8: the display electronics 80 represents the functionality of a standard VGA monitor; column 6, lines 47 – 50 and Figure 8: the control electronics 82 is coupled to the display electronics 80 by an I^2C bus 84, and it represents the display microcontroller communication and control functionality) for receiving and processing commands from said host computer system (column 5, lines 46 – 49: the PC 14 and display 12 support the USB monitor Control Class Specification and VESA Monitor Control Command Set (MCCS) Standard for software control of the display by the PC; Figure 8: the display electronics 80 is coupled to P and D 32/34 which is in communication with the Host Computer 12; column 5, lines 31 and 32 and column 6, lines 61 and 62: the PC 14 drives the display 12 with a standard RGB or TMDS video signal, where RGB is analog video and TMDS is digital video),

when the display apparatus is in the interlaced mode of operation and when the display apparatus is in the noninterlaced mode of operation (column 5, lines 31 and 32: the PC 14 drives the display 12 with a standard RGB or TMDS video signal). Frederick did not expressly disclose the microprocessor comprising control logic for switching said display apparatus between said interlaced and noninterlaced modes of operation in response to at least one of said commands, though Frederick does disclose the PC 14 and display 12 support two different viewing modes: one configured for the display of PC graphics and the other configured for the display of TV video (column 5, lines 33 – 35). Auld discloses a display processor 180 includes a filtering and format conversion unit (FFCU) 210 (column 4, lines 48 – 54), wherein the FFCU convert various source display formats to destination display formats (column 4, lines 55 – 65) and image scaling and format conversion techniques include the use of patches and scaling filters to convert from any input resolutions and scanning modes to any output resolutions and scanning modes (column 19, lines 18 – 21). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Frederick's system to include instructions in the processor to convert interlaced signals to non-interlaced signals and vise versa. One would be motivated to do so because this would allow less expensive monitors and allow users to view multiple sources at the same time.

The combination of Frederick and Roskowski's system teaches a connector coupled to a video capture circuitry as the A/D converter and the circuitry 19, taught by Roskowski, is combined into Frederick's system and the A/D converter 15 and circuitry

19 has inputs and outputs (Roskowski, Figure 2) and Frederick teaches the host computer 12 is coupled to the PC 14 (Frederick, Figure 8).

Regarding independent claim 1, claim 1 is similar in scope as to claim 13, thus the rejection for claim 13 hereinabove is applicable to claim 1.

Regarding dependent claim 2, Frederick teaches interlaced mode of operation supports at least one of a National Television System Committee (NTSC) input, a Phase Alteration by Line (PAL) input, and a Sequential a Memoire (SECAM) input (column 15, line 57 – column 16, line 11).

Regarding dependent claim 3, Frederick teaches noninterlaced mode of operation supports at least one of a computer graphics mode input, VGA input and SVGA input (column 19, lines 23 – 32: displays VGA video from the PC 14).

Regarding dependent claim 4, Frederick teaches the microprocessor receives at least one command from said host computer system (column 13, line 66 – column 14, line 26: send the control command to the display), the command suitable for controlling a television function of the display apparatus from the host computer system (column 13, line 66 – column 14, line 26: the user controls the ability to receive commands specified in Table 10 and that the controls listed in Table 10 is supported by the PC 14) when said display apparatus is operating in the interlaced mode of operation (column 13, lines 43 – 65: the user input from the display's front

button panel and remote control is passed back to the PC 14 for the functionalities in Table 10), wherein the television function includes at least one of changing a channel, volume adjustment and picture adjustment (column 14, lines 10 – 27: Table 10), and wherein changing a channel is performed by the microprocessor and not the host computer system (column 13, line 66 – column 14, line 26: since the control commands can be sent to the display, it is inherent that the display electronics 80 or the control electronics 82 in the display device process the commands).

Regarding dependent claim 5, Frederick teaches the microprocessor receives at least one command from said host computer system, the command suitable for controlling a television function of the display apparatus from the host computer system (column 13, line 66 – column 14, line 26: the user controls the ability to receive commands specified in Table 10 and that the controls listed in Table 10 is supported by the PC 14 and the display respond to the control either internally or send a control command to the display) when said display apparatus is operating in the interlaced mode of operation (column 13, lines 43 – 65: the user input from the display's front button panel and remote control is passed back to the PC 14 for the functionalities in Table 10; column 11, lines 34 and 35: only appropriate user controls that are supported by the display are presented to the user), wherein the television function includes at least one of selecting a video source, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution and color temperatures (column 12, lines 1 – 18: Table 7; column 12, lines 30 – 65: Table 8; column 14, lines 10 – 27: Table 10).

Regarding dependent claim 6, Frederick teaches the television function of the display apparatus is controlled from the host computer system while the display apparatus is in an interlaced mode of operation (column 13, line 66 – column 14, line 26: the user controls the ability to receive commands specified in Table 10 and that the controls listed in Table 10 is supported by the PC 14; column 5, lines 3 – 5: the display 12 may function as a stand-alone TV, including the capability to display standard interlaced TV video).

Regarding dependent claim 7, Frederick teaches the display apparatus is switched to said interlaced mode of operation, a video signal from a video controller in noninterlaced mode is not displayed by said display apparatus (column 5, lines 3 – 5: the display 12 may function as a stand-alone TV, including the capability to display standard interlaced TV video).

Regarding dependent claim 8, Frederick teaches the interlaced mode of operation supports Sequential a Memoire (SECAM) input (column 15, line 57 – column 16, line 11).

Regarding dependent claim 9, Frederick teaches the command is a display mode change command (column 12, lines 30 – 64: Table 8; column 13, lines 3 – 28: Table 9: TV Mode, Stand Alone Mode).

Regarding dependent claim 10, Frederick teaches the command is sent over a serial port (column 10, lines 6 – 23: USB).

Regarding dependent claims 15 and 16 and independent claim 29 and 34, claims 15, 16, 29 and 34 are similar in scope as to claims 4 and 5, thus the rejections for claims 4 and 5 hereinabove are applicable to claims 15, 16, 29, and 34.

Regarding dependent claims 14, 17, 23, 24, 25, 28, 30, 32, 33, 35, 36, and 37, claims 14, 17, 23, 24, 25, 30, 32, 35, and 36 are similar in scope as to claims 2, 3, 6, 9, 10, and 12, thus the rejections for claims 2, 3, 6, 9, 10, and 12 hereinabove is applicable to claims 14, 17, 23, 24, 25, 28, 30, 32, 33, 35, 36, and 37.

Regarding dependent claim 18, Frederick teaches in response to the display apparatus being switched to said interlaced mode of operation, a video signal from said video controller in noninterlaced mode is not displayed by said display apparatus (column 5, lines 3 – 5: the display 12 may function as a stand-alone TV, including the capability to display standard interlaced TV video, where only interlaced TV video signal is displayed when functioning as a stand-alone TV).

Regarding dependent claim 19, Frederick teaches the video controller receives a signal from the display apparatus (Figure 6: Baseband video input (Composite) 52 from the A/V Display 12 to Host Computer 14).

Regarding dependent claim 20, Frederick teaches the signal from the display apparatus is a video signal (Figure 6: Baseband video input (Composite) 52 from the A/V Display 12 to Host Computer 14).

Regarding dependent claim 21, Frederick teaches the video signal is a composite signal (Figure 6: Baseband video input (Composite) 52 from the A/V Display 12 to Host Computer 14).

Regarding dependent claim 22, Frederick teaches the video signal is an S-video signal (column 6, line 57 – column 7, line 15: Table 1: A S-video connector may be substituted if an adapter for composite video support is supplied with the product).

Regarding dependent claims 27, Frederick teaches disclose the command is sent over a data port (column 9, line 66 – column 5: DDC2B support is used in both the PC 14 and display 12; column 10, lines 6 – 23: USB is a bidirectional serial bus).

Regarding dependent claims 46, 49, and 51, Frederick teaches the screen and the microprocessor of the display apparatus are both configured within a display housing of the display apparatus (Figure 8: monitor 12 contains a screen (inherent) and a display electronics 80 and control electronics 82).

Regarding dependent claims 47, 48, and 50, The combination of Frederick and Roskowski's system teaches a second connector coupled to a video capture circuitry as the A/D

converter and circuit 19, taught by Roskowski, is combined into Frederick's system and the A/D converter 15 and circuit 19 has inputs and outputs (Roskowski, Figure 2) and Frederick teaches the host computer 12 is coupled to the PC 14 (Frederick, Figure 8). The combination of Frederick's and Roskowski's systems teaches the second connector is configured to send the television compatible signal from the display apparatus to the video capture circuitry in the noninterlaced mode (Frederick, column 19, lines 25 – 28: when connected to a PC Theatre PC 14 and in slave-mode, the video from the tuner 124 or A/V connectors may be selected and sent to the PC 14 via the control electronics 82 for processing; Roskowski, column 6, lines 9 – 16 and Figure 2: a circuit 19 that translates interlaced video data into non-interlaced data and non-interlaced computer graphics data into interlaced data for presentation on output display monitors capable for displaying either interlaced data or non-interlaced data). The rationale of the parent claims is incorporated herein. The combination of Frederick's and Roskowski's systems teaches the third connector coupled to the video capture circuitry and configured to receive the noninterlaced television output from the video capture circuitry (Roskowski, Figure 2: output line of circuit 19).

Regarding dependent claims 12, 28, 33, and 37, Frederick did not expressly disclose the overlay widow is enabled as at least one of a picture-in-picture (PIP) and a picture-on-picture (POP), however Frederick does disclose PIP functionality (column 16, lines 12 – 23). Auld discloses display monitor 132 that can display images/video/graphics information at high resolution or low resolution at various scanning modes such as interlaced or progressive scanning mode (column 4, lines 12 – 19). It would have been obvious for one of ordinary skill in

the art at the time of the invention to modify Frederick's system to include PIP. One would be motivated to do so because this provides picture-in-picture options and the viewing of multiple desired data.

Regarding dependent claims 52, 53, and 55, Frederick teaches the display apparatus is configured to receive signals from the host computer for controlling the screen when operating in the interlaced mode of operation (column 19, lines 28 – 32: in slave mode, the display 12 passes all user input to the PC 14, for processing and responds to USB commands from the PC 14).

Regarding dependent claim 54, Frederick teaches sending signals from the computer system to control the display apparatus when operating in the interlaced mode of operation (column 19, lines 28 – 32: in slave mode, the display 12 passes all user input to the PC 14, for processing and responds to USB commands from the PC 14).

Claims 11 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frederick et al. (US 6,314,479) in view of Auld et al. (US 6,327,000) and Roskowski et al. (US 5,257, 348) and Newman et al (US 6,154,600).

Regarding dependent claims 11 and 26, Frederick did not expressly disclose the command is sent over a parallel port. Newman discloses a parallel port (column 7, lines 1 – 24). It would have been obvious to one of ordinary skill in the art at the time of applicants invention to modify Frederick's system to send a display mode command from the display apparatus parallel busses to the display apparatus so display mode commands which are digital, need not be

derived from the horizontal and vertical sync signals, which are analog, thus simplifying the transmission and reception of the display mode commands.

Claims 39, 41, 43, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frederick et al. (US 6,314,479) in view of Auld et al. (US 6,327,000) and Roskowski et al. (US 5,257, 348) and Gough et al. (US 6,072,489).

Regarding dependent claims 39, 41, 43, and 45, Frederick did not expressly disclose the computer system permits the utilization of other computer functions on at least one underlying screen of the overlay window. Gough discloses overlay windows 62 and 70 over a screen 60 in where other computer functions are allowable, such as the desktop (Figures 3a and 3b). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Frederick's system to allow computer functions to operate with an overlay window present. One would be motivated to do so because this allows users to multi-task and allow users to utilize the whole screen.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey J. Chow whose telephone number is (571)-272-8078. The examiner can normally be reached on Monday - Friday 10:00AM - 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571)-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJC

/Ulka Chauhan/
Supervisory Patent Examiner, Art Unit 2628